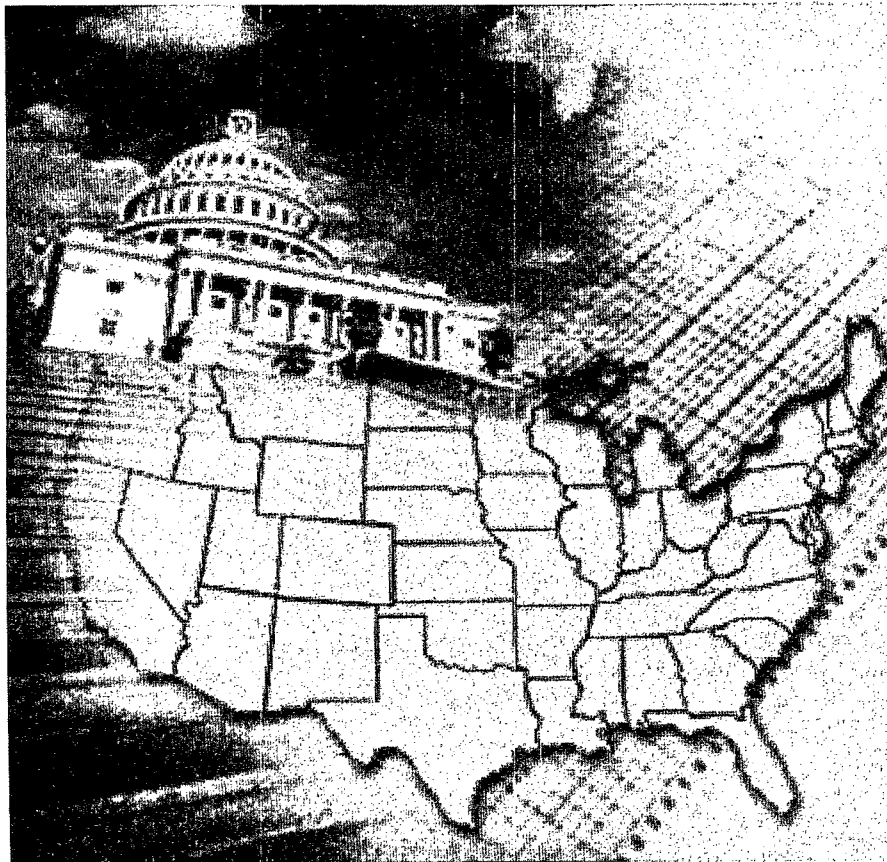


EPA Executive Summary

The National Biennial RCRA Hazardous Waste Report (Based on 1997 Data)



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30 percent postconsumer fiber.

1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the study and the objectives of the research. It also provides a brief overview of the methodology used in the study.

2. The second part of the report is a detailed description of the study area. It includes information about the location of the study area, the population of the study area, and the characteristics of the study area. It also discusses the data sources used in the study.

3. The third part of the report is a detailed description of the study results. It includes information about the findings of the study, the conclusions drawn from the findings, and the implications of the findings. It also discusses the limitations of the study and the need for further research.

4. The fourth part of the report is a conclusion and recommendations. It summarizes the findings of the study and provides recommendations for future research. It also discusses the implications of the findings for policy and practice.

EXECUTIVE SUMMARY

The United States Environmental Protection Agency (EPA), in partnership with the States¹, biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. The purpose of *The National Biennial RCRA Hazardous Waste Report (Based on 1997 Data)* is to communicate the findings of EPA's 1997 Biennial Reporting System (BRS) data collection efforts to the public, government agencies, and the regulated community.² The Report consists of six volumes:

- **Executive Summary** provides an overview of national hazardous waste generation and management practices;
- **National Analysis** presents a detailed look at waste-handling practices in the EPA Regions, States, and largest facilities nationally, including (1) the quantity of waste generated, managed, shipped and received, and imported and exported between States and (2) the number of generators and managing facilities;
- **State Summary Analysis** provides a two-page overview of the generation and management practices of individual States;
- **State Detail Analysis** is a detailed look at each State's waste handling practices, including overall totals for generation, management, and shipments and receipts, as well as totals for the largest fifty facilities;
- **List of Large Quantity Generators** identifies every hazardous waste generator in the United States that reported itself to be a large quantity generator in 1997; and
- **List of Treatment, Storage, and Disposal Facilities** identifies every hazardous waste manager in the United States that reported itself to be a treatment, storage, or disposal facility in 1997.

¹The term "State" includes the District of Columbia, Puerto Rico, Guam, the Navajo Nation, the Trust Territories, and the Virgin Islands, in addition to the 50 United States.

²Some respondents from the States of Georgia and Connecticut submitted Confidential Business Information (CBI) pursuant to §40 CFR 260.2(b). While not included in any public BRS database, CBI has been incorporated into the *Executive Summary* and *National Analysis* volumes of this Report wherever possible. Where CBI has been omitted from these volumes, a footnote has been provided.

RCRA HAZARDOUS WASTE

Throughout this Report, the term RCRA hazardous waste refers to solid waste assigned a Federal Hazardous Waste Code and regulated by RCRA. Some States elect to regulate wastes not regulated by EPA; these wastes are assigned State Hazardous Waste Codes and are not included in this Report. The reader can find more detailed explanations in the *RCRA Orientation Manual* (<http://www.epa.gov/epaoswer/general/orientat/>) and in the Code of Federal Regulations in 40 CFR Parts 260 and 261 (<http://www.epa.gov/docs/epacfr40/chapt-1.info/subch-1/>). Please refer to Appendix E of this Report for a complete list of EPA Hazardous Waste Codes used by the regulated community for their 1997 Biennial Report submissions. Details about the information submitted by the regulated community can be found in the *1997 Hazardous Waste Report Instructions and Forms* (<http://www.epa.gov/epaoswer/hazwaste/data/brsforms.htm>).

CHANGES TO 1997 BIENNIAL REPORTING REQUIREMENTS AND THE NATIONAL BIENNIAL REPORT DATA PRESENTED IN THIS REPORT

In accordance with EPA's efforts to reduce the record keeping and reporting burden on the regulated community, EPA streamlined the Federal data collection forms (*1997 Hazardous Waste Report Instructions and Forms*) for the 1997 Biennial Report cycle by eliminating the Process System (PS) Form. EPA would like to caution all readers of this Report that the change to eliminate the PS Form, along with the changes to the reporting requirements for aqueous wastes, commonly called wastewaters, managed in treatment systems regulated by the Clean Water Act (CWA) and not by the Resource Conservation and Recovery Act (RCRA), will make cursory comparisons of the 1997 National Biennial Report to earlier National Reports misleading.

Wastewaters are defined for biennial reporting as wastes that have a particular form and/or are managed on-site or off-site in treatment systems typically used to manage wastewater. All wastes bearing one of the following wastewater Form Codes (B101-102; B105, B110-116) and/or System Type Codes (M071-079; M081-085, 089; M091-094, 099; M121-125,

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

129; M134-136) are excluded from the National Report data and the 1997 National Biennial Report, **with one exception: wastewaters managed by System Type Code M134 (Deepwell/Underground Injection) are included in the 1997 National Biennial Report.** Refer to Appendix C and D for complete descriptions of the Form Codes and System Type Codes referenced above.

In previous National Reports, the PS Form was used to separate and exclude from the National Report data all wastes going to on-site treatment systems **exempt** from RCRA permitting requirements. **For the 1997 National Biennial Report, EPA included all non-wastewater data and excluded all wastewater data. The wastewater data was excluded regardless of whether the wastes were managed in RCRA permitted systems prior to management in on-site or off-site treatment systems exempt from RCRA permitting requirements.** This is significant, because historically EPA has included only those wastes managed in units subject to RCRA permitting requirements in the National Biennial Reports. EPA does not believe the inclusion of all non-wastewaters will distort the RCRA hazardous waste management picture presented in this Report, because only a small volume of non-wastewaters are managed in treatment systems exempt from RCRA permitting requirements.

RCRA HAZARDOUS WASTE GENERATION

RCRA hazardous waste generation information is obtained from data reported by RCRA large quantity generators (LQGs). A generator is defined as a Federal large quantity generator if:

- the generator generated in any single month 1,000 kg (2,200 pounds or 1.1 tons) or more of RCRA hazardous waste; or
- the generator generated in any single month, or accumulated at any time, 1 kg (2.2 pounds) of RCRA acute hazardous waste; or
- the generator generated, or accumulated at any time, more than 100 kg (220 pounds) of spill cleanup material contaminated with RCRA acute hazardous waste.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

All generators that reported LQG status in 1997 are required to provide EPA with 1997 waste generation and management information. It is important to note that the LQGs identified in this Report have been included based on the most current information made available to EPA by the States. Both EPA and the States have made a significant effort to ensure the accuracy of this data. However, the LQG counts may include some generators that, when determining whether they were LQGs, used a lower State-defined threshold for LQGs, counted wastes regulated only by their States, or counted wastes exempt from Federal regulation.

To help provide a more accurate picture of hazardous waste generation in the United States, EPA requests specific waste generation information from LQGs. For each RCRA hazardous waste generated, LQGs are required to provide a waste description, the applicable Federal Hazardous Waste Codes that most accurately represent the waste generated, and the quantity of waste generated.

In 1997, 20,316 LQGs reported they generated 40.7 million tons of RCRA hazardous waste. When comparing the 1995 National Biennial Report with the 1997 Report, the number of LQGs decreased by 551, and the quantity of hazardous waste generated decreased by 173 million tons or 81%. The decrease in national hazardous waste generation is due in large part to the exclusion of wastewaters from the 1997 national reporting logic. For a more detailed description of the wastewater exclusion, please refer to the section of the *Executive Summary* entitled "Changes to 1997 Biennial Reporting Requirements and the National Biennial Report Data Presented in this Report."

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Biennial Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Report). As presented in Exhibit B.1, 36.3 million tons

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

of non-wastewater wastes were generated in 1995; therefore, a more accurate picture of the change in national hazardous waste generation between 1995 and 1997 is an increase of 4.4 million tons or 11%. Much of this increase resulted from a change in a few generators' wastewater management practices. In 1995, a few generators reported managing wastewaters in treatment systems exempt from RCRA permitting requirements, and, in accordance with the 1995 national reporting logic, these exempt wastewaters were excluded from the 1995 National Biennial Report. In 1997, the same generators reported managing these same wastewaters in Deepwell/Underground Injection (M134), a treatment system included in the 1997 National Biennial Report.

As identified in Exhibit 1, the five (5) States which contributed most to the national hazardous waste generation total in 1997 were Texas (19.0 million tons), Louisiana (4.6 million tons), Illinois (2.2 million tons), Ohio (1.7 million tons), and Mississippi (1.7 million tons). Together, the LQGs in these States accounted for 72% of the national total quantity generated.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

NATIONAL BIENNIAL RCRA HAZARDOUS WASTE REPORT: BASED ON 1997 DATA

Exhibit 1 Quantity of RCRA Hazardous Waste Generated and Number of Hazardous Waste Generators, by State, 1997

STATE	HAZARDOUS WASTE QUANTITY			LARGE QUANTITY GENERATORS		
	RANK	TONS GENERATED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	14	423,968	1.0	25	268	1.3
ALASKA	47	4,547	0.0	44	50	0.2
ARIZONA	35	53,031	0.1	31	180	0.9
ARKANSAS	8	1,052,744	2.6	27	206	1.0
CALIFORNIA	12	672,946	1.7	2	1,782	8.8
COLORADO	28	82,021	0.2	32	163	0.8
CONNECTICUT	32	60,219	0.1	15	404	2.0
DELAWARE	39	19,353	0.0	42	66	0.3
DISTRICT OF COLUMBIA	54	499	0.0	50	20	0.1
FLORIDA	16	398,535	1.0	17	378	1.9
GEORGIA	20	275,096	0.7	14	405	2.0
GUAM	55	412	0.0	53	8	0.0
HAWAII	45	7,241	0.0	47	41	0.2
IDAHO	9	1,014,825	2.5	45	48	0.2
ILLINOIS	3	2,201,025	5.4	5	1,058	5.2
INDIANA	7	1,077,410	2.6	9	633	3.1
IOWA	37	33,681	0.1	30	182	0.9
KANSAS	6	1,333,169	3.3	26	215	1.1
KENTUCKY	21	192,318	0.5	20	348	1.7
LOUISIANA	2	4,624,829	11.4	18	363	1.8
MAINE	46	4,758	0.0	35	137	0.7
MARYLAND	31	63,498	0.2	23	327	1.6
MASSACHUSETTS	27	94,467	0.2	12	474	2.3
MICHIGAN	10	994,047	2.4	8	682	3.4
MINNESOTA	13	427,390	1.1	24	274	1.3
MISSISSIPPI	5	1,654,338	4.1	29	193	1.0
MISSOURI	25	116,705	0.3	18	363	1.8
MONTANA	41	12,266	0.0	46	47	0.2
NAVAJO NATION	56	150	0.0	54	6	0.0
NEBRASKA	38	23,491	0.1	41	68	0.3
NEVADA	40	12,518	0.0	39	90	0.4
NEW HAMPSHIRE	44	9,751	0.0	33	152	0.7
NEW JERSEY	18	348,409	0.9	7	819	4.0
NEW MEXICO	26	99,474	0.2	48	39	0.2
NEW YORK	15	419,899	1.0	1	2,772	13.6
NORTH CAROLINA	30	66,501	0.2	11	505	2.5
NORTH DAKOTA	50	2,686	0.0	51	16	0.1
OHIO	4	1,693,247	4.2	3	1,271	6.3
OKLAHOMA	19	315,296	0.8	34	144	0.7
OREGON	36	49,877	0.1	28	203	1.0
PENNSYLVANIA	17	370,024	0.9	6	1,042	5.1
PUERTO RICO	34	54,120	0.1	38	106	0.5
RHODE ISLAND	42	11,643	0.0	37	107	0.5
SOUTH CAROLINA	43	10,793	0.0	21	341	1.7
SOUTH DAKOTA	53	948	0.0	49	21	0.1
TENNESSEE	11	745,458	1.8	13	461	2.3
TEXAS	1	18,973,406	46.6	4	1,219	6.0
TRUST TERRITORIES	52	1,101	0.0	55	3	0.0
UTAH	29	78,555	0.2	40	89	0.4
VERMONT	48	4,064	0.0	43	65	0.3
VIRGIN ISLANDS	49	2,811	0.0	56	2	0.0
VIRGINIA	33	57,395	0.1	22	329	1.6
WASHINGTON	24	126,601	0.3	10	595	2.9
WEST VIRGINIA	22	152,843	0.4	36	119	0.6
WISCONSIN	23	147,959	0.4	16	400	2.0
WYOMING	51	1,478	0.0	52	15	0.1
CBI DATA	N/A	242	N/A	N/A	2	N/A
TOTAL		40,676,075	100.0		20,316	100.0

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

RCRA HAZARDOUS WASTE MANAGEMENT

RCRA hazardous waste management information is obtained from data reported by active, permitted RCRA treatment, storage, or disposal facilities (TSDs). A TSD is defined as any facility which treats, stores, or disposes of RCRA hazardous waste, regardless of the quantity managed. Only wastes that were treated or disposed of in 1997 are included in the management quantities in this Report. Wastes generated and subsequently stored in 1997 are *not* included in the management quantities in this Report.

To help provide a more accurate picture of hazardous waste management practices in the United States, EPA requests specific waste management information from TSDs. For each RCRA hazardous waste managed, TSDs are required to provide the quantity of waste managed and the System Type Code which represents the management method used to manage the waste.

It is important to note that the total quantity of RCRA hazardous waste generated is less than the total quantity managed. Some of the reasons for this variance include: wastes generated during non-reporting years but shipped and treated or disposed during a reporting year and wastes received for management from generators in foreign countries.

In 1997, 2,025 TSDs reported they managed 37.7 million tons of RCRA hazardous waste. Of the 2,025 facilities, 1,078 were storage-only facilities. When comparing the 1995 National Biennial Report with the 1997 Report, the number of TSDs increased by 42, and the total quantity of hazardous waste managed decreased by 170.5 million tons or 82%. This decrease was largely attributable to the exclusion of wastewaters from the 1997 national reporting logic. For a more detailed description of the wastewater exclusion, please refer to the section of the *Executive Summary* entitled "Changes to 1997 Biennial Reporting Requirements and the Biennial Report Data Presented in this Report."

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Biennial Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Report.) As presented in Exhibit B.2, 35.1 million tons of non-wastewater wastes were managed in 1995; therefore, a more accurate picture of the change in national hazardous waste management between 1995 and 1997 is an increase of 2.6 million tons or 7%. A large portion of this increase resulted from a change in wastewater management practices. In 1995, a few TSDs reported managing wastewater in treatment systems exempt from RCRA permitting requirements, and, in accordance with the 1995 national reporting logic, these exempt wastewaters were excluded from the 1995 National Biennial Report. In 1997, the same TSDs reported managing these same wastewaters in Deepwell/Underground Injection (M134), a treatment system included in the 1997 National Biennial Report. Other factors contributing to the increase included increased waste management activities due to a landfill closing and remediation wastes from RCRA Corrective Action.

As identified in Exhibit 2, the five (5) States whose TSDs managed the largest quantities of hazardous wastes were Texas (17.4 million tons), Louisiana (4.5 million tons), Ohio (1.7 million tons), Mississippi (1.7 million tons), and Kansas (1.6 million tons). The TSDs in these five (5) States account for 71% of the national management total.

In 1997, *land disposal* accounted for 76% of the national non-wastewater management total. Land disposal methods include:

Deepwell/Underground Injection	26 million tons
Landfill	1.5 million tons
Surface Impoundment	1 million tons
Land Treatment/Application/Farming	19 thousand tons

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

NATIONAL BIENNIAL RCRA HAZARDOUS WASTE REPORT: BASED ON 1997 DATA

Exhibit 2 Quantity of RCRA Hazardous Waste Managed and Number of RCRA TSD Facilities, by State, 1997

STATE	HAZARDOUS WASTE QUANTITY ¹			TSD FACILITIES		
	RANK	TONS MANAGED	PERCENTAGE	RANK	NUMBER	PERCENTAGE
ALABAMA	14	415,166	1.1	15	44	2.2
ALASKA	12	449,486	1.2	43	6	0.3
ARIZONA	40	4,218	0.0	29	23	1.1
ARKANSAS	10	1,001,426	2.7	29	23	1.1
CALIFORNIA	7	1,160,627	3.1	1	250	12.4
COLORADO	32	37,658	0.1	32	22	1.1
CONNECTICUT	36	26,680	0.1	25	27	1.3
DELAWARE	43	2,131	0.0	47	4	0.2
DISTRICT OF COLUMBIA	50	0	0.0	51	1	0.0
FLORIDA	21	207,560	0.6	14	46	2.3
GEORGIA	26	72,558	0.2	12	55	2.7
GUAM	50	0	0.0	51	1	0.0
HAWAII	49	99	0.0	48	3	0.1
IDAHO	8	1,093,366	2.9	40	7	0.3
ILLINOIS	13	445,728	1.2	6	86	4.2
INDIANA	6	1,357,777	3.6	17	40	2.0
IOWA	42	3,349	0.0	21	28	1.4
KANSAS	5	1,558,943	4.1	27	24	1.2
KENTUCKY	25	85,575	0.2	21	28	1.4
LOUISIANA	2	4,503,985	11.9	11	57	2.8
MAINE	46	718	0.0	29	23	1.1
MARYLAND	39	4,560	0.0	26	25	1.2
MASSACHUSETTS	37	16,467	0.0	21	28	1.4
MICHIGAN	9	1,075,667	2.9	4	113	5.6
MINNESOTA	23	141,292	0.4	27	24	1.2
MISSISSIPPI	4	1,720,718	4.6	36	16	0.8
MISSOURI	20	238,179	0.6	8	83	4.1
MONTANA	45	987	0.0	39	8	0.4
NAVAJO NATION	50	0	0.0	56	0	0.0
NEBRASKA	31	41,231	0.1	38	11	0.5
NEVADA	35	29,313	0.1	43	6	0.3
NEW HAMPSHIRE	50	0	0.0	51	1	0.0
NEW JERSEY	24	86,095	0.2	7	85	4.2
NEW MEXICO	22	189,509	0.5	37	15	0.7
NEW YORK	15	411,616	1.1	9	73	3.6
NORTH CAROLINA	38	15,674	0.0	5	100	4.9
NORTH DAKOTA	44	1,188	0.0	40	7	0.3
OHIO	3	1,739,368	4.6	13	52	2.6
OKLAHOMA	16	405,898	1.1	16	41	2.0
OREGON	33	32,150	0.1	40	7	0.3
PENNSYLVANIA	11	496,136	1.3	10	63	3.1
PUERTO RICO	27	70,188	0.2	21	28	1.4
RHODE ISLAND	41	3,840	0.0	48	3	0.1
SOUTH CAROLINA	19	302,472	0.8	32	22	1.1
SOUTH DAKOTA	50	0	0.0	50	2	0.1
TENNESSEE	17	403,094	1.1	19	30	1.5
TEXAS	1	17,371,102	46.0	2	135	6.7
TRUST TERRITORIES	48	524	0.0	51	1	0.0
UTAH	18	325,888	0.9	35	20	1.0
VERMONT	50	0	0.0	45	5	0.2
VIRGIN ISLANDS	47	659	0.0	51	1	0.0
VIRGINIA	29	47,737	0.1	18	32	1.6
WASHINGTON	28	49,157	0.1	19	30	1.5
WEST VIRGINIA	30	44,438	0.1	32	22	1.1
WISCONSIN	34	30,934	0.1	3	132	6.5
WYOMING	50	0	0.0	45	5	0.2
CBI DATA	N/A	0	N/A	N/A	1	N/A
TOTAL		37,723,129	100.0		2,025	100.0

¹Quantity managed by storage only is excluded.

Note: Columns may not sum due to rounding.
Percentages do not include CBI data.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Recovery operations accounted for 10% of the national non-wastewater management total. Recovery operations include:

Fuel Blending	1.5 million tons
Metals Recovery (for Reuse)	1.1 million tons
Solvents Recovery	617 thousand tons
Other Recovery	443 thousand tons

Thermal treatment accounted for 9% of the national non-wastewater management total. Thermal treatment units include:

Energy Recovery (for Reuse as Fuel)	1.7 million tons
Incineration	1.7 million tons

The remaining non-wastewater management quantities (5%) were managed in *other treatment and disposal units*, including:

Stabilization	1.4 million tons
Sludge Treatment	411 thousand tons
Other Disposal (Specified in Comments)	251 thousand tons

RCRA HAZARDOUS WASTE SHIPMENTS AND RECEIPTS

RCRA hazardous waste shipment information is obtained from data reported by both RCRA LQGs and RCRA TSDs. To help provide a more accurate picture of hazardous waste shipments in the United States, EPA requests specific shipment information. For each waste shipped, LQGs and TSDs are required to provide a waste description, the applicable Federal

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

Hazardous Waste Codes, the quantity of waste shipped, and the EPA Identification Number of the receiving facility. All RCRA non-wastewater shipments reported by RCRA LQGs and TSDs are included in the waste shipment quantities in this Report, even if the waste was shipped to a transfer facility. In some instances, waste is transferred within a physical location that has more than one EPA Identification Number. These waste transfers are treated as shipments.

RCRA hazardous waste receipt information is obtained from data reported by RCRA TSDs. To help provide a more accurate picture of hazardous waste receipts in the United States, EPA requests certain receipt information from TSDs. For each waste received, TSDs are required to provide a waste description, the applicable Federal Hazardous Waste Codes, the quantity of waste received, and the EPA Identification Number of the facility from which the waste was received. For each received waste which is subsequently managed, TSDs are required to provide the System Type Code which represents the management method used to manage the waste.

RCRA hazardous waste export quantities include wastes generated in one State and shipped to a receiver in a different State. Exports are calculated from information provided by waste shippers. RCRA hazardous waste imports include all wastes received by a State which differs from the State of origin. RCRA hazardous waste imports are calculated from information provided by RCRA TSDs.

In 1997, 18,029 shippers reported shipping 7.3 million tons of hazardous waste. When comparing the 1995 National Biennial Report with the 1997 Report, the number of shippers decreased by 2,468, and the quantity of waste shipped decreased by 3.3 million tons, a 31% decrease. Some of the decrease in the quantity of waste shipped may be attributable to the exclusion of wastewaters from the 1997 national biennial reporting logic. However, since wastewaters are typically managed on-site rather than shipped off-site for management, the decrease between 1995 and 1997 is more likely the result of other factors. For a more detailed description of the wastewater exclusion, please refer to the section of the *Executive Summary* entitled "Changes to 1997 Biennial Reporting Requirements and the National Biennial Report Data Presented in this Report."

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

The wastewater exclusion will make cursory comparisons between the 1997 National Reports and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Biennial Report). As presented in Exhibit B.3, 6.2 million tons of non-wastewater wastes were shipped in 1995; therefore, a more accurate picture of the change in national hazardous waste shipments between 1995 and 1997 is a decrease of 1.1 million tons or 15%.

Of the 7.3 million tons of RCRA hazardous waste shipped in 1997, 4.4 million tons of waste were **exported** from the State in which they were generated to other States. When comparing the 1995 National Biennial Report with the 1997 Report, the quantity of waste exported decreased by 924 thousand tons or 17%. Some of the decrease in the quantity of waste exported may be attributable to the exclusion of wastewaters from the 1997 national reporting logic. However, since wastewaters are typically managed on-site rather than shipped off-site for management, the decrease between 1995 and 1997 is more likely the result of other factors.

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Biennial Report). As presented in Exhibit B.5, 3.6 million tons of non-wastewater wastes were exported to other States in 1995; therefore, a more accurate picture of the change in national hazardous waste exports between 1995 and 1997 is an increase of 753 thousand tons or 17%.

In 1997, 543 TSDs reported receiving 8 million tons of RCRA hazardous waste. When comparing the 1995 National Biennial Report with the 1997 Report, the number of TSDs receiving waste decreased by 101, and the quantity of waste received decreased by 1.3 million tons or 14%. Some of the decrease in the quantity of waste received may be attributable to the exclusion of wastewaters from the 1997 national reporting logic. However, since wastewaters are typically managed on-site rather than shipped off-site for management, the decrease between 1995 and 1997 is more likely the result of other factors.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

The wastewater exclusion will make cursory comparisons between the 1997 National Biennial Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Biennial Report). As presented in Exhibit B.4, 7.9 million tons of non-wastewater wastes were received in 1995; therefore, a more accurate picture of the change in national hazardous waste receipts between 1995 and 1997 is an increase of 87 thousand tons or 1%.

Of the 8 million tons of RCRA hazardous waste received in 1997, 4 million tons of waste were **imported** from other States. When comparing the 1995 National Biennial Report with the 1997 Report, the quantity of waste imported decreased by 1.9 million tons or 32%. Some of the decrease in the quantity of waste imported may be attributable to the exclusion of wastewaters from the 1997 national reporting logic. However, since wastewaters are typically managed on-site rather than shipped off-site for management, the decrease between 1995 and 1997 is more likely the result of other factors.

The wastewater exclusion will make cursory comparisons between the 1997 National Report and earlier National Reports misleading. To facilitate an accurate comparison, Appendix B of the *National Analysis* provides the 1995 National Report data *excluding wastewater* (i.e., the data was compiled using the same national reporting logic used to exclude wastewater data from the 1997 National Biennial Report). As presented in Exhibit B.5, 5.1 million tons of non-wastewater wastes were imported in 1995; therefore, a more accurate picture of the change in national hazardous waste imports between 1995 and 1997 is a decrease of 1.1 million tons or 22%.

WHERE TO OBTAIN ADDITIONAL INFORMATION

All volumes of *The National Biennial RCRA Hazardous Waste Report (Based on 1997 Data)* and the 1997 Biennial Reporting System (BRS) data files can be accessed via the Internet at <http://www.epa.gov/epaoswer/hazwaste/data/#brs> or purchased from the National Technical Information Service (NTIS) at (703) 487-4650.

Changes to the 1997 Biennial Reporting requirements will make cursory comparisons of the 1997 National Biennial Report to earlier National Biennial Reports misleading. Refer to the Executive Summary (ES-2) for a complete explanation.

